

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) ~~PTC~~ An electrical component having a positive temperature coefficient, the electrical component comprising:

~~[[-]] with a base body (8) comprising stacked~~ comprised of ceramic layers and electrode layers, the electrode layers separating adjacent ceramic layers, (4) that are separated from one another by electrode layers (5), wherein the ceramic layers (4) contain comprising a ceramic material that has a positive temperature coefficient in at least one part of the an R/T characteristic curve; and line,

~~[[-]] wherein the electrode layers (5) are contacted alternately with a first collector electrode electrodes (6) attached to the sides a first side of the electrical component and a second collector electrode attached to a second side of the electrical component, wherein the first collector electrode and the second collector electrode contact alternate electrode layers;~~

~~[[-]] with~~ wherein the electrical component has a volume V and an ohmic a resistance R, the resistance R being measured between the collector electrodes at a temperature of between 0° C and 40° C[[,]]; and

wherein[[:]] $V \cdot R < 600 \Omega \cdot \text{mm}^3$.

2. (Currently Amended) The electrical component according to of claim 1, which is manufactured by sintering wherein the ceramic material comprises ceramic green sheets, the ceramic green sheets being sintered with the (1) and electrode layers to form the base (5) together in one operation.

3. (Currently Amended) The electrical component of claim 1 according to one of claims 1 or 2, wherein at least some of the electrode layers (5) contain comprise tungsten.

4. (Currently Amended) The electrical component of claim 1 according to one of claims 1 through 3, wherein at least some of the electrode layers (5) contain comprise tungsten carbide.

5. (Currently Amended) The electrical component of claim 1 according to one of claims 1 through 4, wherein the electrode layers contain comprise WO.

6. (Currently Amended) The electrical component of claim 1 according to one of claims 1 through 5, wherein at least some of the electrode layers contain comprise a tungsten compound that contains where the tungsten has having a valence less than +6.

7. (Currently Amended) Method for the manufacture of a PTC component according to claim 1 with the following steps: A method of manufacturing an electrical component having a positive temperature coefficient, the electrical component comprising:

(a) a base comprised of ceramic layers and electrode layers, the electrode layers separating adjacent ceramic layers, the ceramic layers comprising a ceramic material that has a positive temperature coefficient in at least one part of an R/T characteristic curve, and (b) a first collector electrode attached to a first side of the electrical component and a second collector electrode attached to a second side of the electrical component, wherein the first collector electrode and the second collector electrode contact alternate electrode layers, wherein the electrical component has a volume V and a resistance R, the resistance R being measured between collector electrodes at a temperature of between 0° C and 40° C, and wherein $V \cdot R < 600 \Omega \cdot \text{mm}^3$,

wherein the method comprises:

a) ~~production of a layer stack from~~ forming the base using ceramic green sheets (4) with ~~interposed~~ interspersed with the electrode layers, the ceramic green sheets comprising the ceramic layers (5); and

b) ~~binder removal~~ removing a binder from, and sintering, ~~of a layer stack~~ the base in an environment ~~atmosphere with a lowered~~ having an oxygen content ~~in relation to that~~ is lower than an oxygen content of air.

8. (Currently Amended) ~~Method according to~~ The method of claim 7, wherein the oxygen content of the ~~atmosphere~~ environment is less than 8 vol. %.

9. (Currently Amended) ~~Method according to one of claims 7 or 8~~ The method of claim 7, wherein removing the binder removal is performed at a temperature of $< 600^{\circ} \text{C}$.

10. (Currently Amended) ~~Method according to one of claims 7 through 9~~ The method of claim 7, wherein sintering is performed in a temperature interval of between 1000°C and 1200°C .

11. (Currently Amended) ~~Method according to one of claims 7 through 10~~ The method of claim 7, ~~wherein the~~ further comprising, after removing the binder, keeping a temperature of the ~~layer-stack base after binder removal is kept~~ at a value ~~corresponding that corresponds to a~~ at least to the maximum debinding binder removing temperature at least until sintering ~~is has been~~ completed.

12. (Currently Amended) ~~Method according to one of claims 7 through 11~~ The method of claim 7, wherein removing the binder removal is performed in an environment with an oxygen content of between 0.5 and $< 8 \text{ vol. } \%$.

13. (Currently Amended) ~~Method according to one of claims 7 through 12~~ The method of claim 7, wherein sintering is performed in an environment with an oxygen content ~~corresponding that corresponds to the~~ an oxygen content that is present during removal of the binder removal.

14. (Currently Amended) ~~Method according to one of claims 7 through 13~~ The method of claim 7, wherein sintering is performed in an environment with an oxygen content of between 0.1 and 5 vol. %.

15. (Currently Amended) ~~Method according to one of claims 7 through 14~~ The method of claim 7, wherein the oxygen content of the environment is decreased after the binder is removed ~~is further decreased after binder removal~~.

16. (Currently Amended) ~~Method according to one of claims 7 through 15~~ The method of claim 7, wherein the oxygen content of the environment is reduced continuously ~~lowered~~ after the binder is removed ~~removal~~.

17. (Currently Amended) ~~Method according to one of claims 7 through 15~~ The method of claim 7, wherein after the binder is removed ~~removal~~, the oxygen content of the environment decreases ~~is decreased~~ with increasing temperature.

18. (Currently Amended) ~~Method according to one of claims 7 through 17~~ The method of claim 7, wherein the oxygen content of the environment increases ~~is again increased~~ after a maximum sintering temperature is exceeded.

Applicant : Lutz Kirsten
Serial No. : Not Yet Assigned
Filed : Herewith
Page : 9

Attorney's Docket No.: 14219-068US1
Client's Ref.: P2002,0291USN

19. (Currently Amended) ~~Use of a component according to one of claims 1 through 6 as~~ A SMD-capable PTC resistor element comprising the electrical component of claim 1.